

Claims

What is claimed is:

- 5           1.     A disposable protective multiple layer natural rubber and synthetic elastomeric glove comprising:
- an inner skin-contacting absorbent layer evenly coated over the entire skin-contacting absorbent layer with at least one therapeutic and moisturizing skin care composition absorbed into the skin-contacting layer as an evenly sprayed powder
- 10   absorbed into the skin-contacting absorbent layer when wet, the moisturizing skin contacting composition impregnating the skin-contacting absorbent layer and dried, the skin-contacting absorbent layer adapted to absorb perspiration from a hand of a wearer and the at least one skin care composition adapted for being released in a moist environment by perspiration and the at least one skin care composition adapted for
- 15   transfer to skin on a hand of a wearer by normal contact; and
- at least one outer facing rubber-type material layer.
2.     The glove of claim 1 wherein the inner layer is a non-fiber absorbent material.
- 20           3.     The glove of claim 1 wherein the inner layer is a synthetic hydrophilic material.

4. The glove of claim 1 wherein the inner layer is a propenoic acid based hydrogel.

5. The glove of claim 1 wherein the inner layer has an elongation to break  
5 greater than 200%.

6. The glove of claim 1 wherein the inner layer is impregnated with a solution comprising at least one skin care composition selected from the group of water soluble skin care composition substances including Aloe Vera, Vitamin E, Vitamin C,  
10 Peppermint powder, Grape seed Extract, and Cucumber extract.

7. The glove of claim 1 wherein the outer layer of the glove is made of natural rubber latex.

15 8. The glove of claim 1 wherein the outer layer of the glove is made of acrylonitrile.

9. The glove of claim 1 wherein the outer layer of the glove is made of polyvinylchloride.

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10. The glove of claim 1 wherein the outer layer of the glove is made of polyurethane.

11. The glove of claim 1 wherein the outer layer of the glove is made of polybutadiene.

5 12. A method of manufacturing a disposable protective multiple layer natural rubber and synthetic elastomeric glove with an inner skin-contacting absorbent layer coated with at least one therapeutic and moisturizing skin care composition impregnating the skin care layer, the method comprising:

the first step of forming at least one outer facing layer by dipping and drying a  
10 glove mold in a liquid rubber-type material and drying it;

the second step of forming an inner skin-contacting absorbent layer by dipping the glove mold into a liquid absorbent material over the rubber-type material, heating the glove to dry the two layers, removing the glove mold, rinsing the glove with liquid, and turning the glove inside out still wet; and

15 the third step of spraying a powder formed of at least one therapeutic and moisturizing skin care composition evenly over the entire wet skin-contacting absorbent layer and allowing the powder to be absorbed into the wet skin-contacting absorbent layer impregnating the skin-contacting absorbent layer and drying the skin-contacting absorbent layer while the powder is still being absorbed, the skin-contacting absorbent  
20 layer adapted for absorbing perspiration from a hand of a wearer and the at least one skin care composition adapted for being released in a moist environment by perspiration and

the at least one skin care composition adapted for transfer to skin on a hand of a wearer by normal contact.

13. The method of claim 12 wherein the first step comprises dipping the glove  
5 mold into a compounded natural rubber or synthetic latex to form the outer facing layer of a glove on the mold and leaching and drying the outer facing layer of the glove on the mold.

14. The method of claim 12 wherein the second step comprises dipping the  
10 outer facing layer of the glove on the mold into a pre-prepared dispersion of hydrogel with solidifying agents to form the inner skin-contacting absorbent layer of the glove, heating the two layers on the glove mold in an oven to cure and solidify the two layers of the glove on the mold, removing the glove mold from the oven, stripping the coated glove from the glove mold, rinsing the glove with water to remove the powder and  
15 chemical residues, reversing the glove to turn the glove inside out whereby the inner skin-contacting absorbent layer of the glove faces outward, and draining the reversed glove in an extractor to remove excess water, while the inner layer of the glove is still wet, and leaving a cuff area of the glove closed.

20 15. The method of claim 14, wherein the third step further comprises placing the wet glove in a speed-controlled drum of a tumbling apparatus equipped with a metering pump and at least one blow/spray nozzle, tumbling the gloves in the speed-

controlled drum at a speed such that the glove remains in the bottom half of the drum, and during tumbling, operating a metering pump to move the at least one skin care composition into and through the at least one blow nozzle to apply skin care compositions evenly onto the inner surface of the glove.

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16. The method of claim 15, wherein the skin care compositions applied are in a water soluble powder form.

17. The method of claim 15, wherein the application of the skin care  
10 compositions is performed intermittently in at least four iterations of at least 5-10 seconds in duration each.

18. The method of claim 16, wherein the powder is applied onto the inner  
layer of the glove by direct contact on the glove and by transference, whereby gloves rub  
15 against each other to spread the powder during tumbling.

19. The method of claim 16, wherein the powder applied onto the glove is dissolved and at least partially absorbed by the wet inner layer of the glove.

20. The method of 15, further comprising the steps of removing the glove  
20 from the tumbling apparatus into a dryer, drying the glove at a temperature of 55 degrees C. until completely dried, and cooling the glove to room temperature.

21. The method of claim 20, wherein the inner layer of the glove continues to absorb the skin care compositions during drying.

5 22. The method of claim 12 wherein the glove may be further on-line or off-line chlorinated.

23. The method of claim 12 wherein the glove can be made either by an automatic production line or manual production line.

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24. A method of manufacturing a disposable protective natural rubber and synthetic elastomeric glove with the inner surface of the glove coated with at least one therapeutic and moisturizing skin care composition by directly applying powder formed of at least one therapeutic and moisturizing skin care composition onto the inner surface  
15 of the glove, the method comprising:

the first step of forming at least one outer facing layer by dipping and drying a glove mold in a liquid rubber-type material and drying it;

the second step of heating the glove to dry the glove, removing the glove from mold, rinsing the glove with liquid, and turning the glove inside out still wet;

20 the third step of rinsing the glove with water to remove the powder and chemical residues, reversing the glove to turn the glove inside out whereby the inner surface of the glove faces outward;

the forth step of draining the reversed glove in an extractor to remove excess water, while the inner layer of the glove is still wet, and leaving the glove's cuff area closed;

the fifth step of placing the wet glove in a speed-controlled drum of a tumbling  
5 apparatus equipped with a metering pump and at least one blow/spray nozzle, tumbling  
the gloves in the speed-controlled drum at a speed such that the glove remains in the  
bottom half of the drum. during tumbling , the metering pump moves the at least one  
powder formed skin care composition into and through the at least one blow nozzle to  
evenly apply skin care compositions onto the inner surface of the glove, allowing the  
10 powder to be spread and dissolved on the glove inner surface during tumbling;

the sixth step of removing the glove from the tumbling apparatus into a dryer,  
drying the glove to have skin care compositions form a coating on the inner surface of the  
glove;

the seventh step of cooling the glove to room temperature.